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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,599	02/22/2002	Craig M. Carpenter	MI22-1941	5736

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WELLS ST. JOHN P.S.
601 W. FIRST AVENUE, SUITE 1300
SPOKANE, WA 99201

3

EXAMINER
MOORE, KARLA A

ART UNIT	PAPER NUMBER
1763	

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/082,599	CARPENTER ET AL.
	Examiner	Art Unit
	Karla Moore	1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-109* is/are pending in the application.

4a) Of the above claim(s) *76-109* is/are withdrawn from consideration.

5)☒ Claim(s) *52-66* is/are allowed.

6)☒ Claim(s) *1-51 and 67-75* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-109* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-75, drawn to a semiconductor substrate processing chamber and substrate transfer interfacial structure, classified in class 156, subclass 345.31.

   II. Claims 76-109, drawn to a semiconductor substrate processing chamber and accessory attachment interfacial structure, classified in class 156, subclass 345.37.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, each invention could be used separately as means for isolating a heated processing chamber for an adjacent component. The adjacent component in Invention I is a transfer chamber, however, in Invention II the adjacent component/accessory attachment could be several different types of apparatus, for instance a lift assembly, pump or valve. See MPEP § 806.05(d).

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mr. Mark Matkin on 05/12/03 a provisional election was made without traverse to prosecute the invention of Group I , claims 1-75. Affirmation of this election must be made by applicant in replying to this Office action. Claims 76-109 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims **1-3, 6, 23-30, 32, 67-68 and 70-71** rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,089,543 to Freerks in view of U.S. Patent No. 5,223,113 to Kaneko et al.

8. Freerks discloses a semiconductor substrate processing chamber and substrate transfer chamber interfacial structure, comprising: a body (28) sized and shaped to engage between a semiconductor substrate processing chamber (14) and a substrate transfer chamber (12); the body comprising a substrate passageway (56) extending there through, the passageway comprising walls (31) at least a portion of which are substantially metallic/a metallic insert (column 1, rows 39-41); and a body (29) comprising material peripheral of the walls, the peripheral body comprising mounting openings (Figure 6, not numbered) extending at least partially therein.

9. However, Freerks fails to teach the peripheral body comprising a material that is substantially non-metallic and thermally insulative.

10. Kaneko et al. teach the use of ceramic material at a peripheral portion of a contacting interface between two chambers for purpose of providing excellent heat insulation, which enables power consumption of the heater (in a processing chamber) to be made smaller and the temperature control of the process chamber to be made easier (column 2, rows 45-48; column 5, rows 44-46; column 7, rows 38-44; and column 8, rows 6-14).

11. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided non-metallic, thermally insulating material peripheral to a metallic passageway in Freerks in order to provide excellent heat insulation, enabling power consumption of the

heater (in a processing chamber) to be made smaller and the temperature control of the process chamber to be made easier as taught by Kaneko et al.

12. With respect to claim 2, all of the passageway walls are substantially metallic (see Figure 6).

13. With respect to claims 3 and 27, at column 7, rows 38-40, as noted above, Freerks teaches the invention substantially as claimed.

14. However, Freerks fails to teach the body comprising a greater volume of substantially non-metallic material and thermally insulative material than of substantially metallic material.

15. Kaneko et al. teach that the heat transmitted through the non-metallic material is smaller than the heat transmitted through metal.

16. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a greater volume of non-metallic material than metallic material to take advantage of this property as taught in Kaneko et al.

17. With respect to claim 6, Kaneko et al. teach the insulating material as ceramic (column 7, rows 36-38).

18. With respect to claim 23, with the combination of Freerks and Kaneko et al., the body further comprises a volume in at least one cross sectional region transverse the passageway which extends to diametrically opposing portions of the perimeter, at least a majority of said cross sectional region constituting a substantially non-metallic and thermally insulative material (see Figure 6).

19. With respect to claims and 24, the passageway comprises walls, at least a portion of the walls (31) being substantially metallic.

20. With respect to claims 25 and 26, the prior art does not disclose a specific value for the depth of the cross-sectional region. However, it would have been obvious to one of ordinary skill in the art to optimize the value based on a number of apparatus variables, such as the material used for the structure, the heating temperature in the processing chamber and the size of the processing and transfer chambers. One of ordinary skill in the art would have worked to find a value that was large enough that proper

isolation was ensured, but not so large that the size of the apparatus was unduly increased, leading to a larger apparatus than needed and thus increased costs.

21. With respect to claim 28, at least one face is configured for contacting a processing chamber (14) and another face is configured for contacting a transfer chamber (12).

22. With respect to claim 29, the inner portion (31) of the body/insert of Freerks is a metallic insert.

23. With respect to claim 30, as noted above, Kaneko et al. teach that the heat transmitted through the non-metallic material is smaller than the heat transmitted through metal.

24. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a greater volume of non-metallic material than metallic material to take advantage of this property as taught in Kaneko et al.

25. With respect to claim 32, the interfacial structure comprises bolt holes (not numbered) extending through the mass and spaced from the passageway (see Figure 6).

26. With respect to claims 67-68 and 70-71, Freerks and Kaneko disclose the interfacial structure as claimed as described above.

27. Claims **4** and **31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks and Kaneko et al. as applied to claims 1-3, 6, 23-30, 32, 67-68 and 70-71 above, and further in view of U.S. Patent No. 6,263,829 to Schneider et al.

28. Freerks and Kaneko et al. disclose the invention substantially as claimed and as described above.

29. However, Freerks and Kaneko fail to teach the substantially non-metallic, thermally insulative material as polymeric.

30. Schneider et al. teach the use of polymeric material as a construction material for a processing chamber where high temperatures and a harsh chemical environment are present (column 6, rows 40-42).

31. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a polymeric material as the non-metallic, thermally insulative material Freerks and Kaneko in order to take advantage of the materials suitability for use at high temperatures and in harsh chemical environments as taught by Schneider et al.

32. Claim **5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks and Kaneko et al. as applied to claims 1-3, 6, 23-30, 32, 67-68 and 70-71 above, and further in view of Japanese Patent No. 08-034678 A to Sonoda et al.

33. Freerks and Kaneko et al. disclose the invention substantially as claimed and as described above.

34. However, Freerks and Kaneko fail to teach the substantially non-metallic, thermally insulative material as a gel.

35. Sonoda et al. teach the use of a gel material for the purpose of taking advantage of its heat insulating properties and good mechanical strength (abstract).

36. It would have been obvious to one ordinary skill in the art at the time the Applicant's invention was made to have provided a gel material as the non-metallic, thermally insulative material Freerks and Kaneko in order to take advantage of the materials heat insulating properties and good mechanical strength as taught by Sonoda et al.

37. Claims **7 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks and Kaneko et al. as applied to claims 1-3, 6, 23-30, 32, 67-68 and 70-71 above, and further in view of Japanese Patent Publication No. 2001-261375 to Sato et al.

38. Freerks and Kaneko disclose the invention substantially as claimed and as described above.

39. However, Freerks and Kaneko fail to teach the substantially non-metallic, thermally insulative material as porous or glass.

40. Sato et al. teach the use of a material comprising glass and which is porous for the purpose of obtaining a heat insulating material with excellent chemical resistance and excellent handleability suitable for use in semiconductor production (Japanese and Derwent abstracts).

41. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a material comprising glass and which is porous Freerks and Kaneko in order to obtain a heat insulating material suitable for use in semiconductor production as taught by Sato et al.

42. Claim **9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks and Kaneko et al. as applied to claims 1-3, 6, 23-30, 32, 67-68 and 70-71 above, and further in view of U.S. Patent No. 5,626,936 to Alderman.

43. Freerks and Kaneko disclose the invention substantially as claimed and as described above.

44. However, Freerks and Kaneko fail to teach the substantially non-metallic, thermally insulative material as at least two of solid, liquid and gas.

45. Alderman teaches the use of a construction material containing both liquid and solid phases for the purpose of avoiding exposure of an interior space from much higher or much lower temperatures of an exterior surface, thereby reducing the power requirements to maintain the desired temperature within the interior space (abstract).

46. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a two-phase, solid and liquid material as the non-metallic, thermally insulative material in Freerks and Kaneko in order to isolate two regions with differing temperatures, thus, reducing the power requirement to maintain a desired temperature in either of the regions as taught by Alderman.

47. Claims **10**, **41-47** and **73-74** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks and Kaneko et al. as applied to claims 1-3, 6, 23-30, 32, 67-68 and 70-71 above, and further in view of U.S. Patent No. 3,618,919 to Beck.

48. Freerks and Kaneko disclose the invention substantially as claimed and as described above.

49. However, Freerks and Kaneko fail to teach at least two wall openings positioned to establish a gas curtain across the passageway and at least one gas feed conduit in fluid communication with the wall openings.

50. Beck teaches the use of a gas curtain for the purpose of controllably isolating respective gas atmospheres of two zones (abstract). The gas curtain comprises: multiple gas feed conduits (Figure 3, 54 and 58) in fluid communication with wall openings (46).

51. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a gas curtain in the prior art in order to controllably isolated respective gas atmospheres of two zones as taught by Beck.

52. With respect to the limitations drawn to the exact number of wall openings, the courts have ruled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

53. Claims **11-14, 16-22, 33-35, 38-40 and 69** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,089,543 to Freerks, in view of U.S. Patent No. 5,223,113 to Kaneko et al. and in view of U.S. Patent No. 6,045,620 to Tepman et al.

54. Freerks discloses a semiconductor substrate processing chamber and substrate transfer chamber interfacial structure, comprising: a substantially rectangular body (28) sized and shaped to engage between a semiconductor substrate processing chamber (14) and a substrate transfer chamber (12); the body comprising a substrate passageway (56) extending there through.

55. However, Freerks fails to teach the peripheral body comprising a material that is substantially non-metallic and thermally insulative.

56. Kaneko et al. teach the use of ceramic material at a peripheral portion of a contacting interface between two chambers for purpose of providing excellent heat insulation, which enables power consumption of the heater (in a processing chamber) to be made smaller and the temperature control of the process chamber to be made easier (column 2, rows 45-48; column 5, rows 44-46; column 7, rows 38-44; and column 8, rows 6-14).

57. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided non-metallic, thermally insulating material peripheral to a metallic passageway in Freerks in order to provide excellent heat insulation, enabling power consumption of the heater (in a processing chamber) to be made smaller and the temperature control of the process chamber to be made easier as taught by Kaneko et al.

58. At column 7, rows 38-40, Kaneko et al. teach that the heat transmitted through the non-metallic material is smaller than the heat transmitted through metal.

59. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a greater volume of non-metallic material than metallic material to take advantage of this property as taught in Kaneko et al.

60. Freerks and Kaneko disclose the invention substantially as claimed and as described above.

61. However, Freerks and Kaneko fail to teach the sealant channel comprises a sealant channel/o-ring groove peripherally surrounding the passageway.

62. Tepman et al. teach the use of a sealant channel/o-ring groove (Figures 5 and 6, 82; column 6, rows 2-5) on a substantially metallic insert (31) received within a passageway, the insert defining a substrate passageway there through, where the purpose of the sealant channel/o-ring groove is forming a seal between a process chamber and the metallic insert.

63. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a sealant channel/o-ring groove in the prior art in order to form a seal between a process chamber and a metallic insert.

64. With respect to claim 12, the sealant channel of Tepman is designed to surround the passageway (see Figure 5).

65. With respect to claim 13, as noted above, the sealant channel is an o-ring groove surrounding a passageway (see Figure 5).

66. With respect to claim 14, as noted above, the combination of Freerks, Kaneko and Tepman represent a body that comprises a substantially metallic insert received within the passageway, the insert

defining an insert passageway there through, the sealant channel being received on the substantially metallic insert.

67. With respect to claim 16, the body as disclosed by Freerks is substantially rectangular.

68. With respect to claim 17, the body in Freerks comprises at least one face (faces of 29 contacting the transfer chamber and the process chamber) having a majority of which is substantially metallic.

69. With respect to claim 18, as taught above, Kaneko et al. teach that a non-metallic, thermally insulative material such as ceramic has better heat transmission properties; therefore, it would have been obvious to one of ordinary skill in the art if even better heat transmission properties were desired to form a face having a majority area which is substantially non-metallic.

70. With respect to claim 19, in Freerks one face is configured for contacting a semiconductor substrate processing chamber and another face is configured for contacting a substrate transfer chamber.

71. With respect to claim 20, each of the faces is generally planer. One of the faces comprises two intersecting generally planer components.

72. With respect to claims 21 and 22, the sealant channel/o-ring groove is formed on the face facing the processing chamber (as taught by Tepman et al.) and the other face is substantially metallic (Freerks).

73. With respect to claims 33-35, 38-40, Freerks and Kaneko fail to teach the interfacial structure comprising a plurality of openings for receiving load bearing plugs.

74. Tepman et al. teach the use of a plurality of openings and supplying a plurality of screws to those openings in order to attach an interfacial structure to a transfer chamber (column 5, rows 35-36).

75. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a plurality of openings and to have supplied a plurality of screws to those openings in Freerks and Kaneko in order to attach an interfacial structure to a transfer chamber as taught by Tepman et al.

76. Claim **15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks, Kaneko et al. and Tepman et al. as applied to claims 11-14, 16-22, 33-35, 38-40 and 69 above, and further in view of U.S. Patent No. 6,263,829 to Schneider et al.

77. Freerks, Kaneko and Tepman disclose the invention substantially as claimed and as described above.

78. However, Freerks, Kaneko and Tepman fail to teach the substantially non-metallic, thermally insulative material as polymeric.

79. Schneider et al. teach the use of polymeric material as a construction material for a processing chamber where high temperatures and a harsh chemical environment are present (column 6, rows 40-42).

80. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a polymeric material as the non-metallic, thermally insulative material Freerks, Kaneko and Tepman in order to take advantage of the materials suitability for use at high temperatures and in harsh chemical environments as taught by Schneider et al.

81. Claims **36 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks and Kaneko et al. as applied to claims 11-14, 16-22, 33-35, 38-40 and 69 above, and further in view of U.S. Patent No. 4,289,061 to Emmett.

82. Freerks and Kaneko disclose the invention substantially as claimed and as described above.

83. However, Freerks and Kaneko fail to teach the body comprising load bearing plugs within at least some of the openings in the thermally insulative material, the load bearing plugs having greater compression strength than the thermally insulative material.

84. Emmett teaches the use load bearing plugs (Figure 1, 20) including a hollow portion (2) where the purpose of the hollow portion is to absorb a substantial amount of the total load applied by the plug (column 2, rows 41-49).

85. It would have been obvious to one of ordinary skill in art at the time the Applicant's invention was made to have provided at least some of load bearing plugs with a hollow portion in Freerks and Kaneko in order to absorb a substantial amount of the total load applied by the plug as taught by Emmett.

86. Claim **48** is rejected under 35 U.S.C. 103(a) as being unpatentable over Freerks, Kaneko and Beck as applied to claims 10, 41-47 and 73-74 above, and further in view of U.S. Patent No. 6,263,829 to Schneider et al.

87. Freerks, Kaneko and Beck disclose the invention substantially as claimed and as described above.

88. However, Freerks, Kaneko and Beck fail to teach the substantially non-metallic, thermally insulative material as polymeric.

89. Schneider et al. teach the use of polymeric material as a construction material for a processing chamber where high temperatures and a harsh chemical environment are present (column 6, rows 40-42).

90. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a polymeric material as the non-metallic, thermally insulative material Freerks, Kaneko and Beck in order to take advantage of the materials suitability for use at high temperatures and in harsh chemical environments as taught by Schneider et al.

91. Claims **49 and 50** are rejected under 35 U.S.C. 103(a) as being unpatentable Freerks, Kaneko and Beck as applied to claims 10, 41-47 and 73-74 above, and further in view of U.S. Patent No. 6,045,620 to Tepman et al.

92. However, Freerks, Kaneko, Beck fail to teach the sealant channel comprises a sealant channel/o-ring groove peripherally surrounding the passageway.

93. Tepman et al. teach the use of a sealant channel/0-ring groove (Figures 5 and 6, 82; column 6, rows 2-5) on a substantially metallic insert (31) received within a passageway, the insert defining a

substrate passageway there through, where the purpose of the sealant channel/o-ring groove is forming a seal between a process chamber and the metallic insert.

94. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a sealant channel/o-ring groove in the prior art in order to form a seal between a process chamber and a metallic insert.

95. Claim **51** is rejected under 35 U.S.C. 103(a) as being unpatentable Freerks, Kaneko and Beck as applied to claims 10, 41-47 and 73-74 above, and further in view of U.S. Patent No. 6,045,620 to Tepman et al.

96. Freerks, Kaneko and Beck disclose the invention substantially as claimed and as described above

97. Tepman et al. teach the use of a plurality of openings and supplying a plurality of screws to those openings in order to attach an interfacial structure to a transfer chamber (column 5, rows 35-36).

98. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a plurality of openings and to have supplied a plurality of screws to those openings in Freerks and Kaneko in order to attach an interfacial structure to a transfer chamber as taught by Tepman et al.

99. With respect to the recitation that each of the load bearing plugs has a greater compression strength than the thermally insulative material, it would have been obvious to one of ordinary skill in the art to provide the plugs comprising a material which would enable the load bearing plugs to absorb a majority of the load, rather than body so as not to impose undue stress on the body. The courts have ruled that the selection of a known material based on its suitability for its intended use is prima facie obviousness. Sinclair & Carroll Co. v. Interchemical Corp., U.S. 327, 65 USPQ 297 (1954). Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jigsaw puzzle. 325 U.S. at 335, 65 USPQ at 301.

100. Claim **72** is rejected under 35 U.S.C. 103(a) as being unpatentable Freerks, Kaneko as applied to claims 1-3, 6, 23-30, 32, 67-68 and 70-71 above, and further in view of U.S. Patent No. 6,045,620 to Tepman et al.

101. Freerks and Kaneko disclose the invention substantially as claimed and as described above

102. Tepman et al. teach the use of a plurality of openings and supplying a plurality of screws to those openings in order to attach an interfacial structure to a transfer chamber (column 5, rows 35-36).

103. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a plurality of openings and to have supplied a plurality of screws to those openings in Freerks and Kaneko in order to attach an interfacial structure to a transfer chamber as taught by Tepman et al.

104. With respect to the recitation that each of the load bearing plugs has a greater compression strength than the thermally insulative material, it would have been obvious to one of ordinary skill in the art to provide the plugs comprising a material which would enable the load bearing plugs to absorb a majority of the load, rather than body so as not to impose undue stress on the body. The courts have ruled that the selection of a known material based on its suitability for its intended use is prima facie obviousness. Sinclair & Carroll Co. v. Interchemical Corp., U.S. 327, 65 USPQ 297 (1954). Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jigsaw puzzle. 325 U.S. at 335, 65 USPQ at 301.

Allowable Subject Matter

105. Claims 52-66 are allowed.

106. Claim 75 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

113. The following is an examiner's statement of reasons for allowance and indication of allowable subject matter: The prior art fails to fairly teach or suggest the body as claimed in the claims mentioned above with the mass of substantially non-metallic and thermally insulative material having first and second opposing and generally planar faces, one of the faces having a recess formed therein and the

body comprising a metal plate in physical connection with the substantially metallic insert, the metal plate being received with the face recess of the mass of substantially non-metallic and thermally insulative material.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 703.305.3142. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 703.308.1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9310 for regular communications and 703.872.9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

km
August 11, 2003

Primary Examiner
AU 1763
P. Hassanzadeh